

Claims

1. Linear or crosslinked cationic polyelectrolyte, characterized in that it is obtained by
5 copolymerization of at least one cationic monomer with at least one neutral monomer and at least one nonionic surfactant monomer.

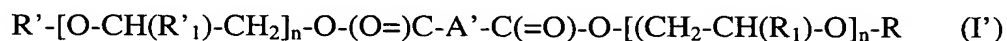
2. Polyelectrolyte as defined in Claim 1, in which the neutral monomers are chosen from acrylamide,
10 methacrylamide, vinylpyrrolidone, diacetone-acrylamide, dimethylacrylamide, (2-hydroxyethyl) acrylate, (2,3-dihydroxypropyl) acrylate, (2-hydroxyethyl) methacrylate, (2,3-dihydroxypropyl) methacrylate or an ethoxylated derivative having a molecular weight of between 400 and
15 1000, of each of these esters.

3. Polyelectrolyte as defined in either of Claims 1 and 2, in which the cationic monomers are chosen from 2,N,N,N-tetramethyl-2-[(1-oxo-2-propenyl)-amino]propanammonium chloride (AMPTAC), 2,N,N-trimethyl-
20 2-[(1-oxo-2-propenyl)amino]propanammonium chloride, N,N,N-trimethyl-3-[(1-oxo-2-propenyl)amino]propanammonium chloride (APTAC), diallyldimethylammonium chloride (DADMAC), N,N,N-trimethyl-2-[(1-oxo-2-propenyl)]ethan-
ammonium chloride, N,N,N-trimethyl-2-[(1-oxo-2-methyl-
25 2-propenyl)]ethanammonium chloride, N-[2-(dimethyl-amino)-1,1-dimethyl]acrylamide, N-[2-(methylamino)-1,1-dimethyl]acrylamide, 2-(dimethylamino)ethyl acrylate, 2-(dimethylamino)ethyl methacrylate or N-[3-(dimethyl-amino)propyl]acrylamide.

30 4. Polyelectrolyte as defined in any one of Claims 1 to 3, in which the nonionic surfactant monomers are chosen from the compounds represented either by general formula (I):



35 or alternatively by general formula (I'):



in which formulae (I) and (I'):

n and n' represent, independently of each other, a number between 1 and 50;

A represents an unsaturated aliphatic monovalent radical comprising from 2 to 6 carbon atoms,

5 A' represents an unsaturated aliphatic divalent radical comprising from 2 to 6 carbon atoms,

R₁ and R'₁ represent, independently of each other, a hydrogen atom, a methyl radical or an ethyl radical; and

10 R and R' represent, independently of each other, a saturated or unsaturated, linear or branched, aliphatic hydrocarbon radical comprising from 8 to 30 carbon atoms.

5. Polyelectrolyte as defined in Claim 4, for which in formulae (I) and (I'), A represents the vinyl radical or the 2-propenyl radical and A' represents the 1,2-ethenediyl radical or the 2-propene-1,2-diyl radical.

6. Polyelectrolyte as defined in any one of Claims 1 to 5, for which in formulae (I) and (I'), R and R' represent, independently of each other, a saturated or unsaturated, linear or branched, aliphatic hydrocarbon radical comprising from 8 to 18 carbon atoms.

25 7. Polyelectrolyte as defined in any one of Claims 1 to 6, for which in formulae (I) and (I'), R₁ and R'₁ each represent a hydrogen atom.

8. Polyelectrolyte as defined in any one of Claims 1 to 7, for which in formulae (I) and (I'), n and n' represent, independently of each other, a number between 1 and 10.

9. Polyelectrolyte as defined in any one of Claims 1 to 8, characterized in that:

35 from 5% to 35% of the monomeric units which it comprises is a cationic monomer,

from 55% to 95% of the monomeric units which it comprises is a neutral monomer, and

from 0.1% to 5% of the monomeric units which it comprises is a nonionic surfactant monomer.

10. Polyelectrolyte as defined in any one of Claims 1 to 9, characterized in that it is obtained by copolymerization of at least one cationic monomer with at least one neutral monomer, at least one nonionic
5 surfactant monomer and a non-zero proportion of N-[2-hydroxy-1,1-bis(hydroxymethyl)ethyl]propenamide.

11. Polyelectrolyte as defined in Claim 10, characterized in that:

from 5% to 35% of the monomeric units which it
10 comprises is a cationic monomer,

from 35% to 91% of the monomeric units which it comprises is a neutral monomer,

from 0.1% to 5% of the monomeric units which it comprises is a nonionic surfactant monomer, and

15 from 3% to 20% of the monomeric units which it comprises is the monomer N-[2-hydroxy-1,1-bis(hydroxymethyl)ethyl]propenamide.

12. Composition comprising an oily phase, an aqueous phase, at least one water-in-oil (W/O) type
20 emulsifying agent, at least one oil-in-water (O/W) type emulsifying agent, in the form of a self-reversible invert latex comprising from 20% to 70% by weight, preferably from 25% to 40% by weight, of a cationic polyelectrolyte as defined in any one of Claims 1 to
25 11.

13. Use of the polyelectrolyte or of the self-reversible invert latex of the said polyelectrolyte as defined in any one of Claims 1 to 12, as a thickener for cosmetic or pharmaceutical compositions, as a
30 thickener for printing pastes for the textile industry, as thickeners for industrial or household detergents, as additives for the petroleum industry, or as a rheology modifier for drilling mud.

14. Use according to Claim 13, as thickeners
35 and/or as emulsifiers in cosmetic or pharmaceutical compositions intended for hair care and/or conditioning.

15. Cosmetic or pharmaceutical composition, characterized in that it contains, as emulsifying and/or thickening agent, an effective quantity either

of the cationic polyelectrolyte or of the self-reversible invert latex as defined in one of Claims 1 to 12.